

Abstract

A fuel injection valve with a valve body (1) and a bore (3), embodied as a blind bore, whose bottom face is oriented toward the combustion chamber. A conical valve seat (9), in which at least one injection port (11) is disposed, is embodied on the bottom face. In the bore (3), a pistonlike valve member (5), which is longitudinally displaceable counter to a closing force, is disposed and has a valve member tip (7), which in the closing position of the valve member (5) comes to rest on the valve seat (9). A first conical face (30) and a second conical face (32), disposed toward the combustion chamber toward the first conical face, are embodied on the valve member tip (7), and the cone angle (α) of the first conical face (30) is smaller than the cone angle (γ) of the valve seat (9), which in turn is smaller than the cone angle (β) of the second conical face (32). One annular groove (35) is embodied between the first conical face (30) and the second conical face (32), and an additional encompassing annular groove (42) is disposed on the second conical face (32) and at least partly coincides with the injection ports (11) in the closing position of the valve member (5), so as to supply all the injection ports (11) uniformly with fuel even if the valve member (5) is off its axis (Fig. 2).